

A 12-week Randomized Intervention Comparing Three USDG Healthy Diets Among African American Adults



BACKGROUND:

The US Dietary Guidelines (USDGs) suggest three main dietary patterns to help people eat healthy and lower their risk for disease: the Healthy US diet, the Healthy Mediterranean diet, and the Healthy Vegetarian diet. In the US, most adults do not follow these guidelines, and few intervention studies of these three patterns exist.

Poor diet choices are linked to common chronic diseases in the US like obesity and type 2 diabetes. The Healthy Eating Index (HEI) rates how well people follow these diets. Adults in the US, on average, score low on the HEI - 58 out of 100.

African Americans have poorer HEI scores than other race or ethnic groups, leading to higher rates of obesity and greater risk of diseases like type 2 diabetes. Eating a plant-based diet (vegan or vegetarian) may reduce the risk of chronic diseases. Although few Americans follow plant-based diets, more African Americans than whites or Hispanics follow a vegan or vegetarian diet. Also, because people of African descent have followed plant-based diets for thousands of years, there may be genetic reasons for better health outcomes from these diets.

The Dietary Guidelines: 3 Diets (DG3D) study is testing the effect of the three USDGs dietary patterns among African Americans at risk of type 2 diabetes. The intervention was culturally tailored for study participants. This review shares the results of the 12-week pilot study.

WHAT WE DID:

DG3D tested whether Healthy Mediterranean and Healthy Vegetarian dietary patterns improved diet quality and reduced the risk of type 2 diabetes more than a Healthy US dietary pattern. Due to COVID-19, the weekly intervention classes were held online. Participants were placed, at random, into one of the three diet groups and attended online classes. To test the intervention, they filled out diet recalls, answered questionnaires, and took part in lab assessments.

Of the 63 participants, 21 were in the Healthy US diet group, 22 in the Healthy Mediterranean group, and 20 in the Healthy Vegetarian group.

To be included in the study, participants had to:

1. be an African American adult aged 19–65 years,
2. be living with overweight or obesity, and
3. have at least two other risk factors for type 2 diabetes, such as family history of type 2 diabetes, high blood pressure, or physical inactivity.

During the 12-week study, participants in each diet group took part in weekly classes and kitchen demonstrations via Zoom. The classes were led by an African American who was a registered dietitian. Classes included a welcome session, sharing success and challenges, nutrition and behavior change topics, cooking demonstrations, and setting SMART goals. The class materials were based on handouts from USDG, MyPlate.gov, and the Diabetes Prevention Program. The research team chose recipes using MyPlate.gov's cuisine filter. Calorie goals were set using each participant's age, body weight, activity level, and sex.

The study outcomes were changes in body weight, HbA1c (a measure of the average glucose in the blood over three months), diet quality, and blood pressure.

WHAT WE FOUND:

People in the Mediterranean (Med) group attended the most classes (10.6), followed by the Healthy US group (9.6) and the Healthy Vegetarian (Veg) group (8.1). After 12 weeks, all groups lost a significant amount of weight – about 2.6% to 3.1% of their starting weight. But there were no differences in weight loss by group – all groups lost a similar amount of weight.



Also, changes in HbA1c, blood pressure, and diet quality did not differ by group. Yet, some changes within groups were seen. For example, the Healthy US group decreased their blood pressure, and the Med group improved their diet quality, especially when compared to the Veg group. Overall, these results were not expected – that is, the Med and Veg groups did not have greater improvements in outcomes than the Healthy US group.

There are several reasons why results may not have been as expected. First, at the beginning of the study, the Veg group already had better diet quality and ate fewer calories, even though participants were put into groups at random. Thus, the Veg group had less room for improvement. Second, 12 weeks might not have been long enough to see changes in HbA1c. Finally, a common weight loss target for health benefits is 5%. Participants

lost half of that target in just 12 weeks, showing they were on track for health promoting weight loss if the study had been longer. Our results suggest that all three healthy diet patterns recommended by the USDG can lead to weight loss in African American adults.

SUMMARY:

The DG3D 12-week study tested three recommended diet patterns to lower type 2 diabetes risk and promote weight loss among African American adults. The program was culturally tailored for African Americans, was led by African American program staff on Zoom, and led to weight loss in all three groups. Even though the study results were not as expected, the 12-week study laid the groundwork to make the interventions even better. For future research, it's important to consider longer study times, have in-person cooking classes, and find better ways to keep people following plant-based diets engaged.

To Learn More: The full research report for the DG3D study is available online:

<https://www.sciencedirect.com/science/article/abs/pii/S0022316622132426>

If you would like a full version of the research report or if you have questions about the study, please contact Dr. Brie Turner-McGrievy, Professor, Health Promotion, Education, and Behavior Department and BRIE Lab at mail to: brie@sc.edu. To learn more about the DG3D study, please visit: DG3D



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